

User's Manual

Ethernet Interface

Rev. 4.00

SRP-270

SRP-275

SRP-350

SRP-350plus

SRP-370 / 372

SRP-770 / 770II

SLP-T400




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1. Manual Information

The purpose of this manual is to provide information on the operation and usage instructions of the Ethernet Interface for the BIXOLON Printers.


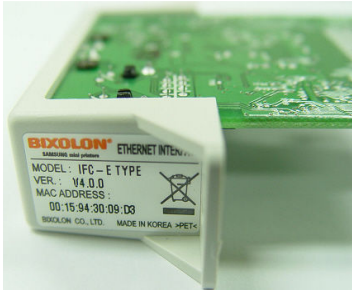
2. Interface card and available printer

Printer	Interface Card	Hardware version	그림
SRP-270 SRP-350	IFA-E TYPE	V4.x.x V3.x.x V2.x.x V1.x.x	
SRP-350Plus SRP-370 / 372	IFA-E TYPE	V4.x.x V3.x.x	
SRP-275	IFC-E TYPE	V4.x.x V3.x.x	
SRP-770	RIF-EN10B	V3.x.x	
SRP-770II SLP-T400	RIF-EN10B	V3.x.x	
	ON Board	V4.x.x	Integrated printer

3. Specifications

3-1. Hardware version

Hardware version is marked on the label on the interface card bracket. Interface Ver: V4.X.X has Function key while Ver:V3.X.X doesn't have it.

IFA-E TYPE	IFC-E TYPE
 <p>The image shows the IFA-E TYPE Ethernet interface card bracket. It is a metal bracket with a green PCB mounted on it. The label on the bracket reads: BIXOLON ETHERNET INTERFACE, MODEL: IFA-E TYPE, VER: V4.0.0, MAC ADDRESS: 00:15:94:10:0E:70, BIXOLON CO., LTD. MADE IN KOREA. There is a small circular hole and a rectangular cutout on the bracket.</p>	 <p>The image shows the IFC-E TYPE Ethernet interface card bracket. It is a metal bracket with a green PCB mounted on it. The label on the bracket reads: BIXOLON ETHERNET INTERFACE, MODEL: IFC-E TYPE, VER: V4.0.0, MAC ADDRESS: 00:15:94:30:09:03, BIXOLON CO., LTD. MADE IN KOREA. There is a small circular hole and a rectangular cutout on the bracket.</p>

[Note]

- The DIP switch on the interface board should always be OFF.

3-2. Configuration Tool

BIXOLON provides 2 types of network and serial communication set up utilities as a below;

- Configure_V4.x.x.exe
- Web Server

3-3. Virtual Driver

- It converts output of Serial (COM) port into output of Ethernet (TCP/IP) port.
- It is available for Windows 2000, XP and 2003 server.

3-4. Hardware version and Configuration Tool

Hardware version	Interface card	Printer	Configuration Tool file	Network interface
V4.x.x	IFA-E	SRP-270,350 SRP-370,372 SRP-350Plus	Configure_V4.x Web Server	10/100 Base-T All in one
	IFC-E	SRP-275		
	ON Board	SRP-770II SLP-T400		
V3.x.x	IFA-E	SRP-270,350 SRP-370,372 SRP-350Plus	Configure _V3.x	
	IFC-E	SRP-275		
	RIF-EN10B	SRP-770 SRP-770II SLP-T400		
V2.x.x	RIF-350E	SRP-270,350	Ethernet_V2.0	10 Base-T
V1.x.x	RIF-350E	SRP-270,350	Ethetnet_V1.3	10 Base-T

[Note]

In case the hardware version is V4.X.X or higher, use Configure_V4.x or Web server. You can simply use Web Server on Internet Explorer.

3-5. Details of interface card

	Details
Network interface	10/100 Base-T All in one (Auto detection)
Protocol	TCP, UDP, IP, ICMP, ARP
IP mode	static IP, DHCP (Dynamic Host Configuration Protocol)
RX buffer	2 KByte
Flow control	Hardware (RTS/CTS)
Baud rate (Serial speed)	1200 ~ 230400 bps

4. How to install

1) Check the interface version

[Note]

- Each version uses its own Configuration Tool.

2) Turn of the printer and insert the interface card.

3) Set the baud rate (Serial speed)

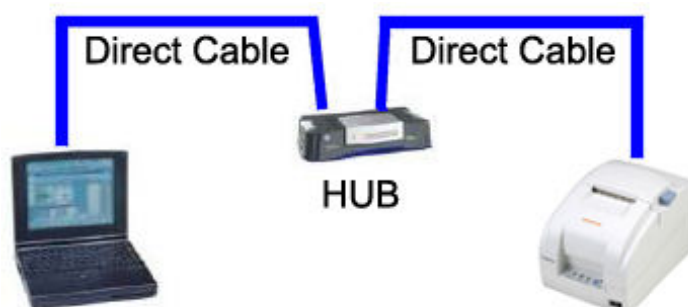
- SRP-270,275: Max. 19200 bps
- SRP-350: Max. 57600 bps
- SRP-350Plus: Max. 115200 bps
- SRP-370,372: Max. 115200 bps
- SRP-770: Max. 115200bps
- SRP-770 II : Max. 230400 bps
- SLP-T400: Max. 230400 bps

[Note]

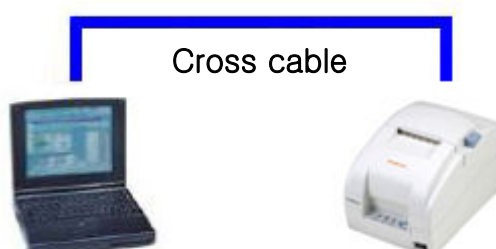
- The baud rate (Serial speed) of the interface card is from 1200 ~ 230400 bps.
- The baud rate (Serial speed) of the printer can be set with DIP switch
(Refer to [Appendix 1])

4) Connect LAN cable to the interface card and turn on the printer.

(1) Use **direct cable** to connect to HUB (Switch).



(2) Use **cross cable** to connect to LAN card of computer.

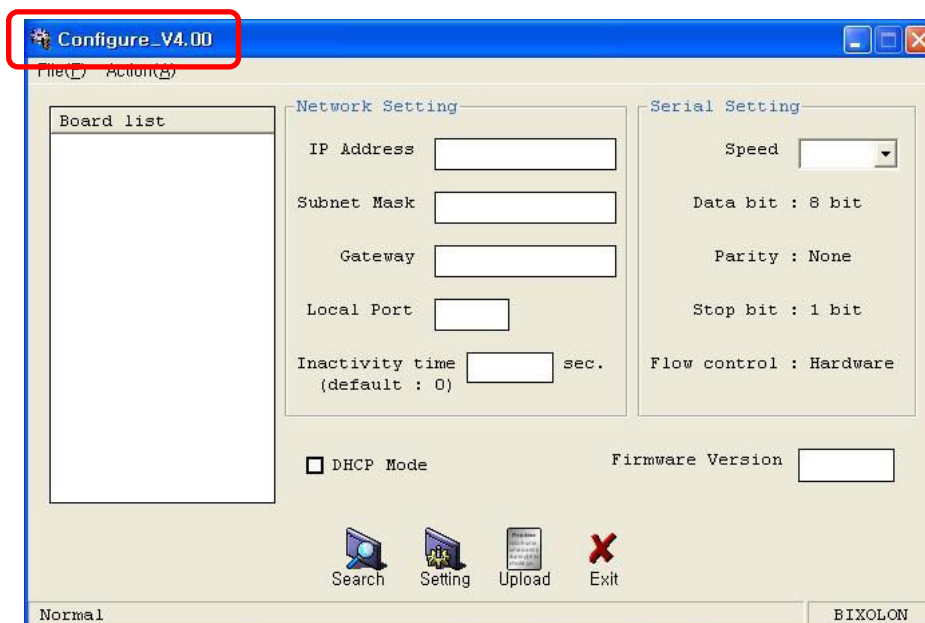


5. Static IP interface set up

5-1. Configuration Tool

1) Turn on the printer.

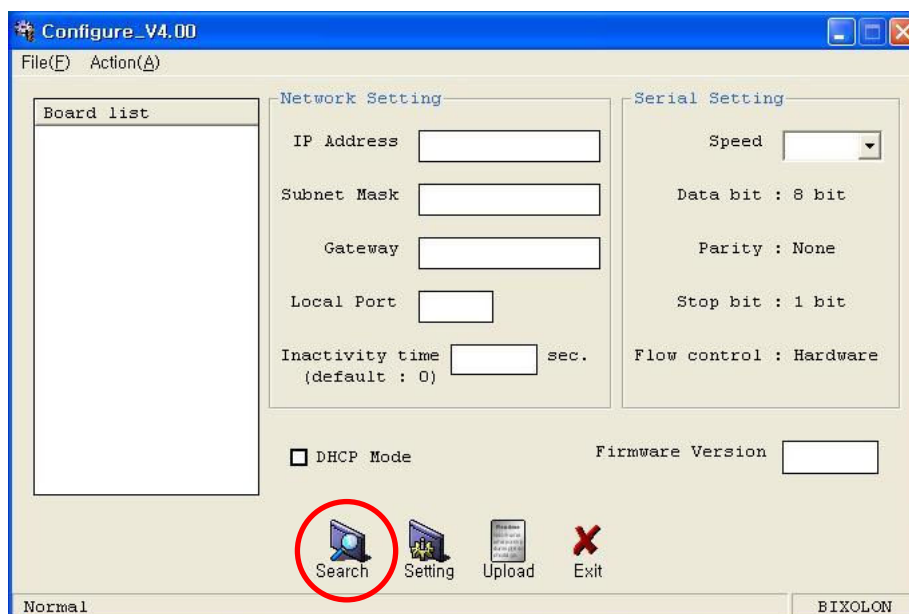
2) Execute **Configure Tool**.

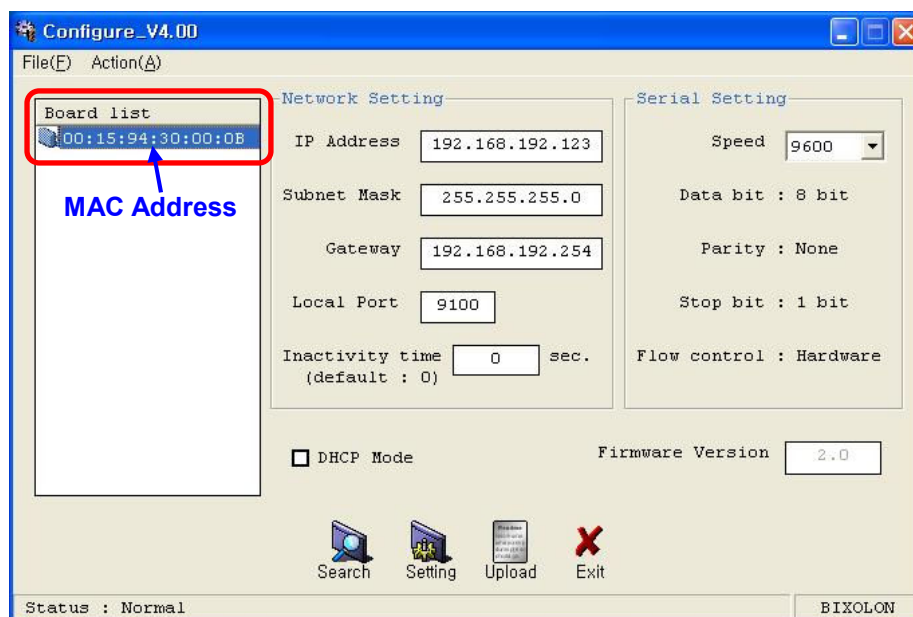


[Note]

- Use proper Configuration Tool dependent on hardware version

3) Click **Search**.



4) Select MAC Address in Board list and set up Network Setting.**[Note]**

- If many MAC addresses appear, refer to the MAC address on the label of the interface card.
- Ask the Network administrator IP and its related information.
- If you are not aware of Subnet Mask, refer to the below.

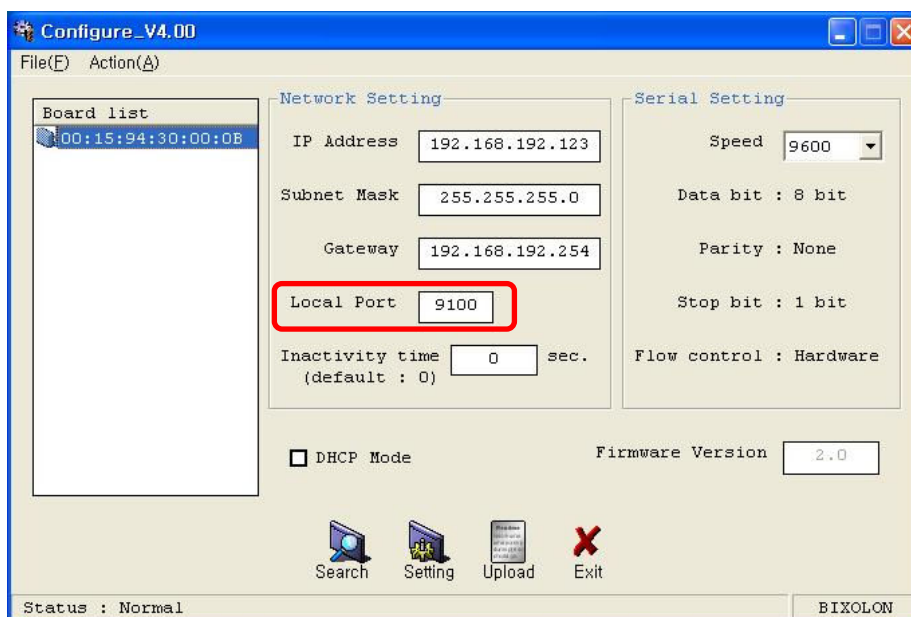
When the IP address is

- (1) 1~126.xxx.xxx.xxx: Subnet Mask: 255.0.0.0
- (2) 128~191.xxx.xxx.xxx: Subnet Mask: 255.255.0.0
- (3) 192~223.xxx.xxx.xxx: Subnet Mask: 255.255.255.0

For example, when the IP address is 192.168.192.321,
Subnet mask is 255.255.255.0.

- If you are not aware of Gateway,
 - (1) When the Network is connected to Internet (Router or Server computer), refer to the Network setting of other computers on the Network.
 - (2) When the Network is connected to Internet (Router or Server computer), enter 0.0.0.0 for Gateway.

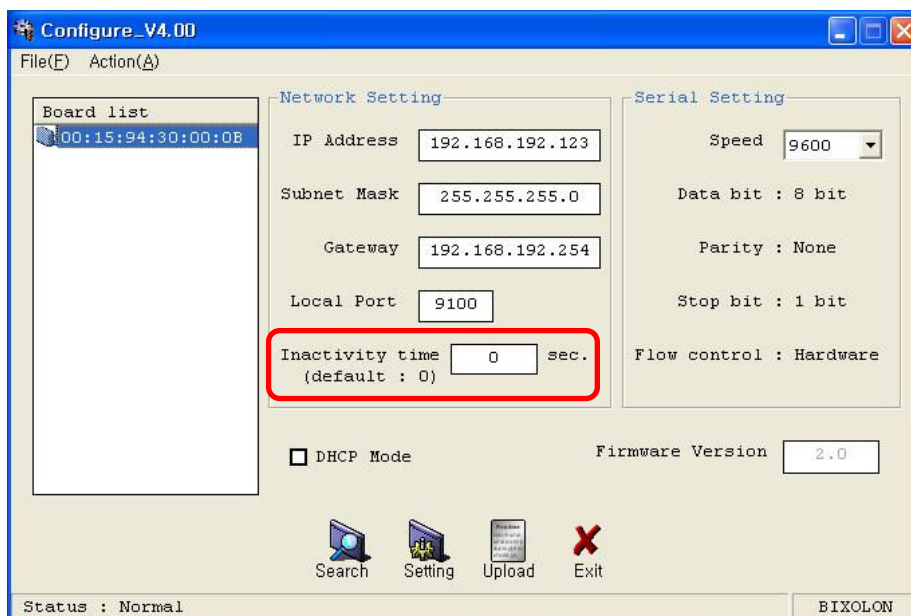
5) Enter value at **Local Port**.



[Note]

- Default value is **9100**. Choose from 6000 to 10000.

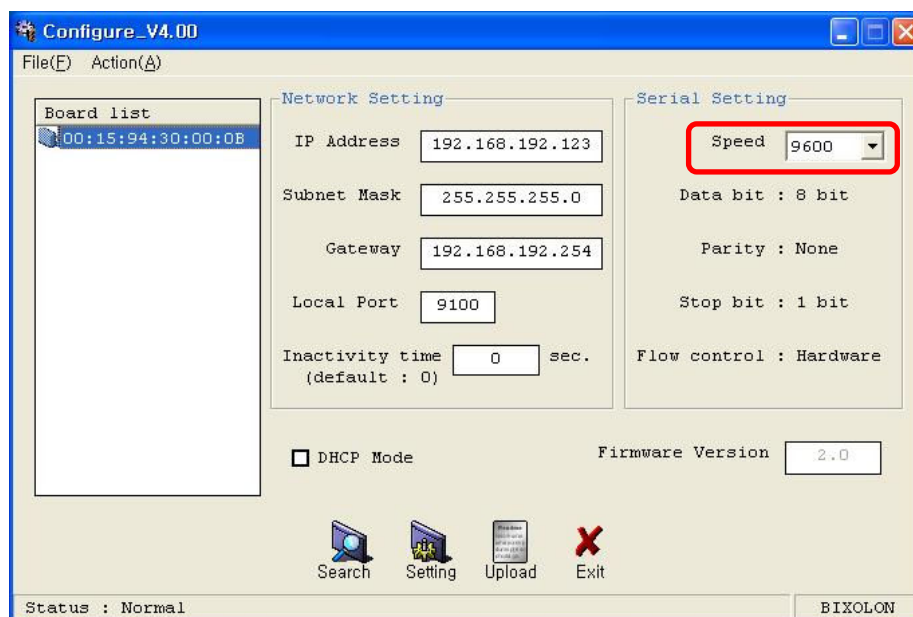
6) Set **Inactivity Time** as '0'.



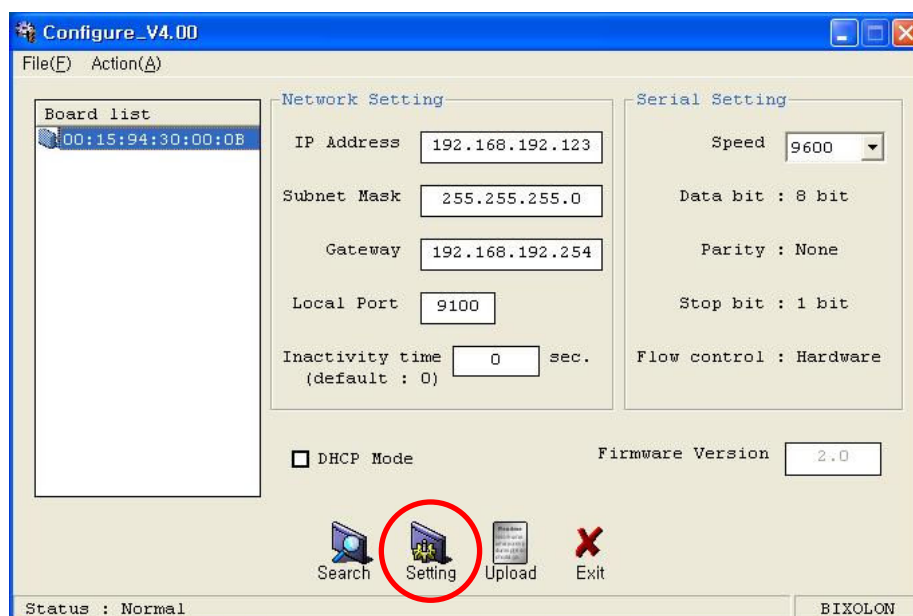
[Note]

- Default value is 0. Choose from 0 to 65535.

- When you set Inactivity time, Ethernet interface will disconnect by force after designated time. When you set 0, Forced disconnection function is not available.

7) Set baud rate (Speed) at **Serial Setting****[Note]**

- The baud rate (Speed) should be same as the baud rate of the printer.
(Refer to [Appendix 1])
- Highest baud rate (Speed) can be used.

8) When setting finishes, click **Setting**.**[Note]**

Successfully finished set up

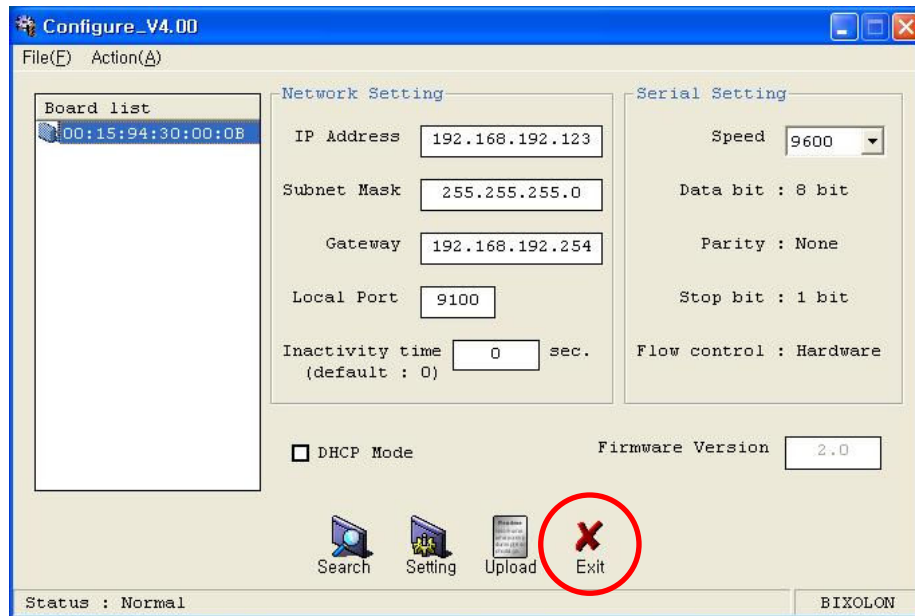


Unsuccessfully finished set up



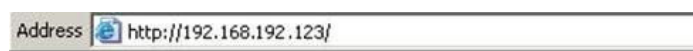
- When setting doesn't finish correctly, try again.

9) Click **Exit** to finish set up.



5-2. Web Server

- 1) Execute Internet Explorer.
- 2) Enter IP address of the printer at **Address** of Internet Explorer and click **go**.



Configuration

F/W ver.	2.0
MAC	00:15:94:30:00:0B
Source IP	<input type="text" value="192.168.192.123"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Gateway IP	<input type="text" value="192.168.192.254"/>
Local Port	<input type="text" value="9100"/>
Inactivity Time	<input type="text" value="0"/>
Serial speed	<input type="text" value="9600"/>
DHCP mode	<input type="checkbox"/>

[Firmware update](#)

[Note]

- If you are not aware of IP address, check IP address by pushing Function key.
(Refer to [Appendix2])

- Ask Network administrator IP Address and its related information.

- 3) When **Configuration** Window appears, enter new **Source IP**.

Configuration

F/W ver.	2.0
MAC	00:15:94:30:00:0B
Source IP	<input type="text" value="192.168.192.123"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Gateway IP	<input type="text" value="192.168.192.254"/>
Local Port	<input type="text" value="9100"/>
Inactivity Time	<input type="text" value="0"/>
Serial speed	<input type="text" value="9600"/>
DHCP mode	<input type="checkbox"/>

[Firmware update](#)

[Note]

- If you are not aware of Subnet Mask, refer to the below.
- When the IP address is
 - (1) 1~126.xxx.xxx.xxx: Subnet Mask: 255.0.0.0
 - (2) 128~191.xxx.xxx.xxx: Subnet Mask: 255.255.0.0
 - (3) 192~223.xxx.xxx.xxx: Subnet Mask: 255.255.255.0For example, when the IP address is 192.168.192.321,
Subnet mask is 255.255.255.0.
- If you are not aware of Gateway,
 - (1) When the Network is connected to Internet (Router or Server computer), refer to the Network setting of other computers on the Network.
 - (2) When the Network is connected to Internet (Router or Server computer), enter 0.0.0.0 for Gateway.

4) Enter value of Local Port.

The screenshot shows the 'Configuration' page of a device. The 'Local Port' field is highlighted with a red box and contains the value '9100'. Other fields include F/W ver. (2.0), MAC (00:15:94:30:00:0B), Source IP (192.168.192.123), Subnet Mask (255.255.255.0), Gateway IP (192.168.192.254), Inactivity Time (0), Serial speed (9600), and DHCP mode (unchecked). An 'Apply' button is at the bottom, and a 'Firmware update' link is at the bottom right.

F/W ver.	2.0
MAC	00:15:94:30:00:0B
Source IP	192.168.192.123
Subnet Mask	255.255.255.0
Gateway IP	192.168.192.254
Local Port	9100
Inactivity Time	0
Serial speed	9600
DHCP mode	<input type="checkbox"/>

Apply

[Firmware update](#)

5) Set Inactivity Time.

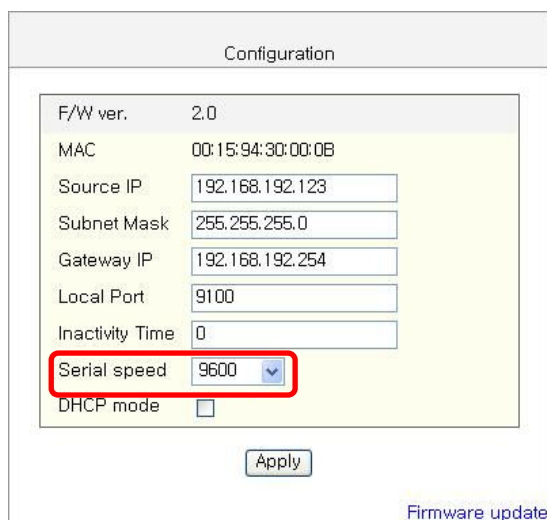
The screenshot shows the 'Configuration' page of a device. The 'Inactivity Time' field is highlighted with a red box and contains the value '0'. Other fields include F/W ver. (2.0), MAC (00:15:94:30:00:0B), Source IP (192.168.192.123), Subnet Mask (255.255.255.0), Gateway IP (192.168.192.254), Local Port (9100), Serial speed (9600), and DHCP mode (unchecked). An 'Apply' button is at the bottom, and a 'Firmware update' link is at the bottom right.

F/W ver.	2.0
MAC	00:15:94:30:00:0B
Source IP	192.168.192.123
Subnet Mask	255.255.255.0
Gateway IP	192.168.192.254
Local Port	9100
Inactivity Time	0
Serial speed	9600
DHCP mode	<input type="checkbox"/>

Apply

[Firmware update](#)

6) Set baud rate (**Serial speed**).

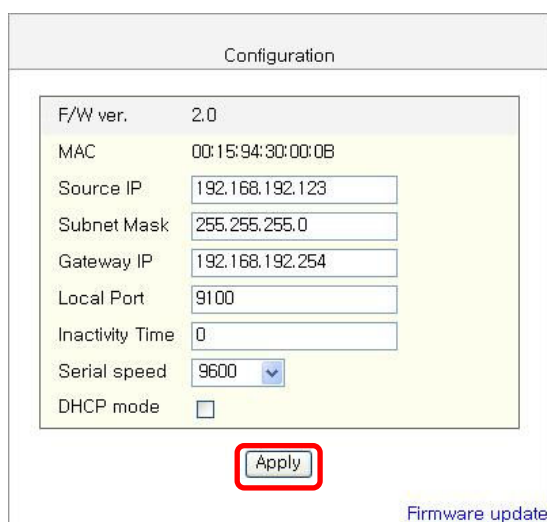


The screenshot shows a 'Configuration' window with a yellow background. It contains the following fields: F/W ver. (2.0), MAC (00:15:94:30:00:08), Source IP (192.168.192.123), Subnet Mask (255.255.255.0), Gateway IP (192.168.192.254), Local Port (9100), Inactivity Time (0), Serial speed (9600), and DHCP mode (unchecked). The 'Serial speed' dropdown menu is highlighted with a red rectangular box. Below the fields is an 'Apply' button and a 'Firmware update' link.

[Note]

The baud rate (Speed) should be same as the baud rate of the printer. (Refer to [Appendix 1])

7) When setting finishes, click **Apply**.



This screenshot is identical to the previous one, showing the 'Configuration' window. In this view, the 'Apply' button at the bottom center is highlighted with a red rectangular box. The 'Serial speed' dropdown menu is still set to 9600.

[Note]

When the setting finishes successfully, the following message appears.

Please press here if you would like to back to the configuration

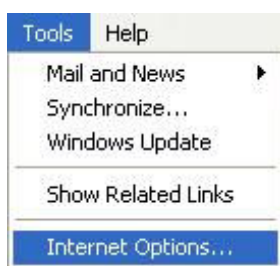
8) If you click the message, you can check your configuration setting.

[Note]

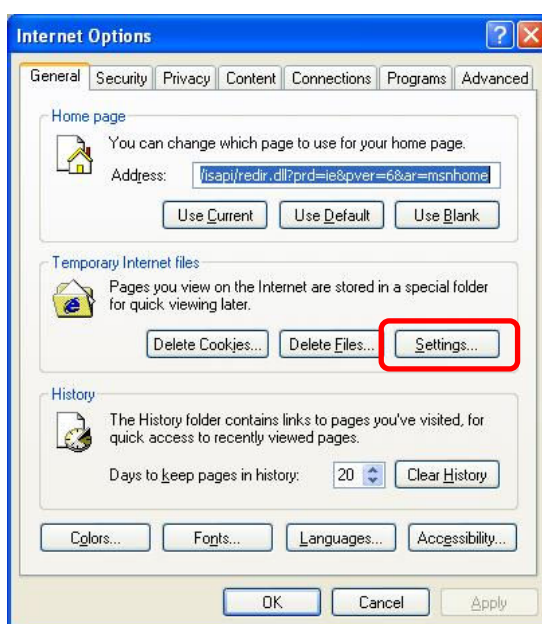
- If any change was not found after setting on Web Server, check the bellows;

(1) Execute Internet Explorer.

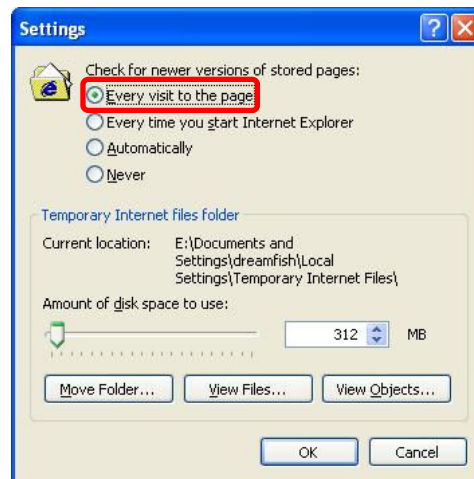
(2) Internet Explorer **Menu** → **Tools** → **Internet options**.



(3) **General tab** → **Temporary internet file** → **Settings**



(4) Check for newer version of stored pages → Click **Every visit to the page**.

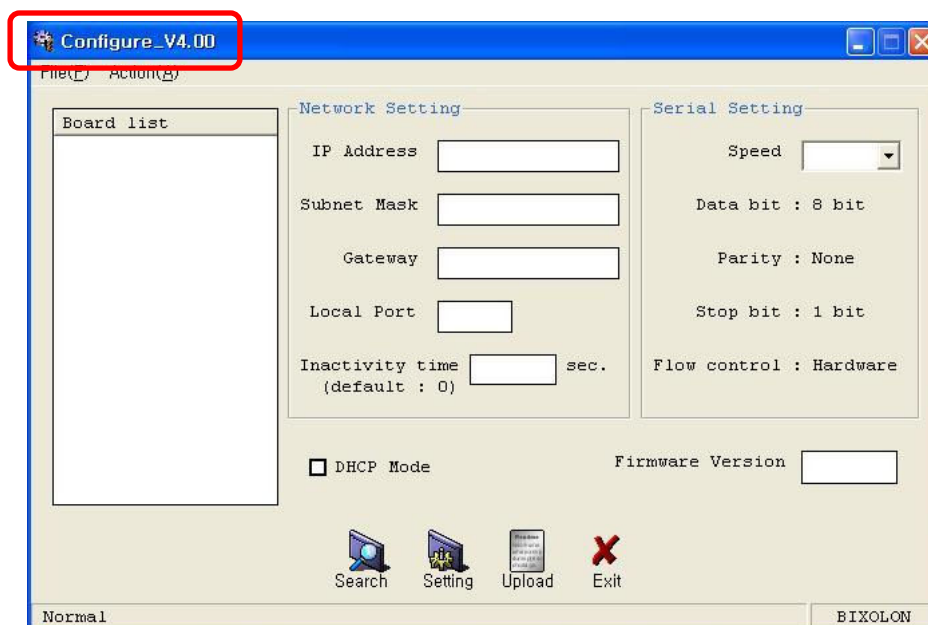


(5) Click **Refresh** in Internet Explorer.

6. DHCP interface set up

6-1. Configuration Tool

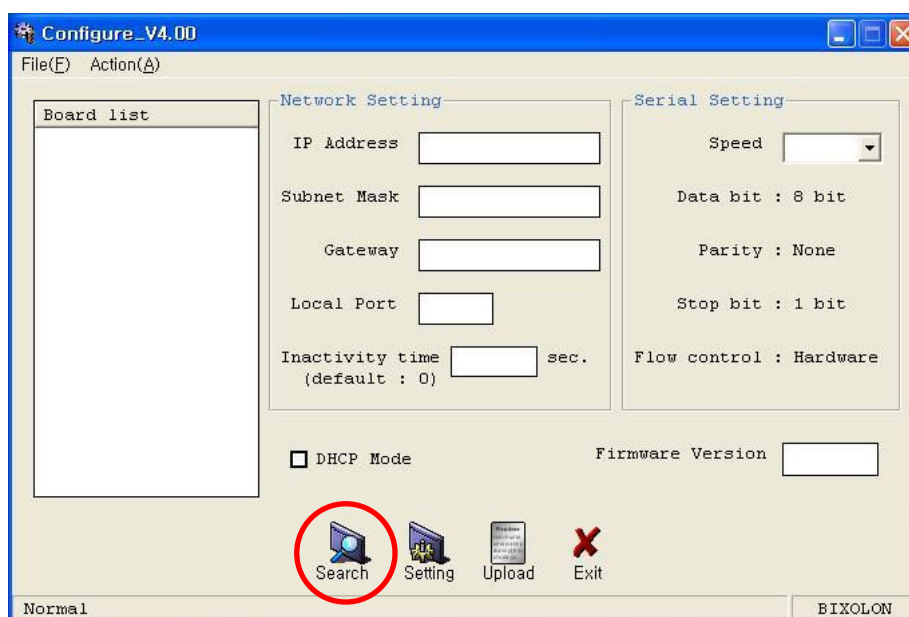
- 1) Turn on the printer.
- 2) Execute **Configure Tool**.



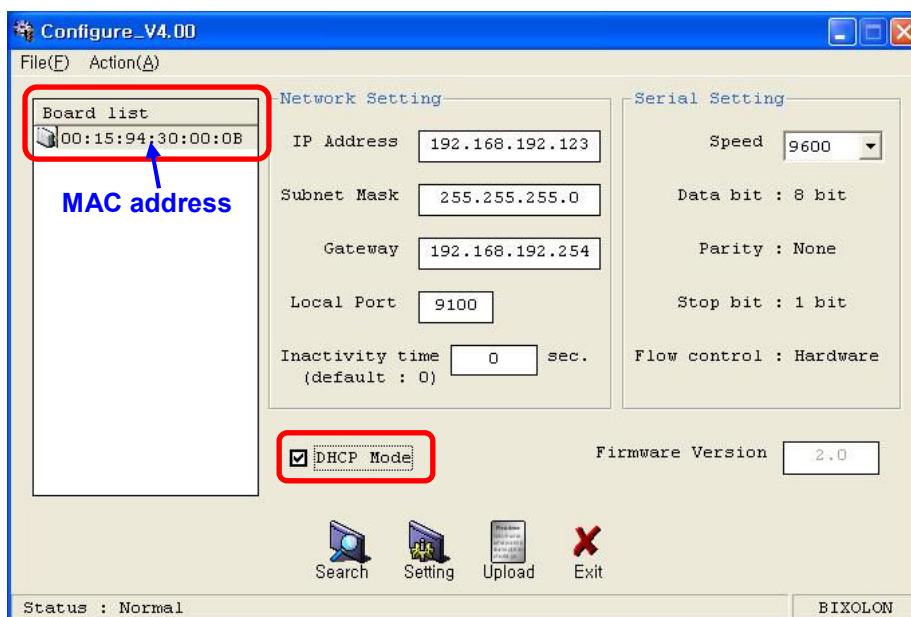
[Note]

- Use proper Configuration Tool dependent on hardware version

- 3) Click **Search**.



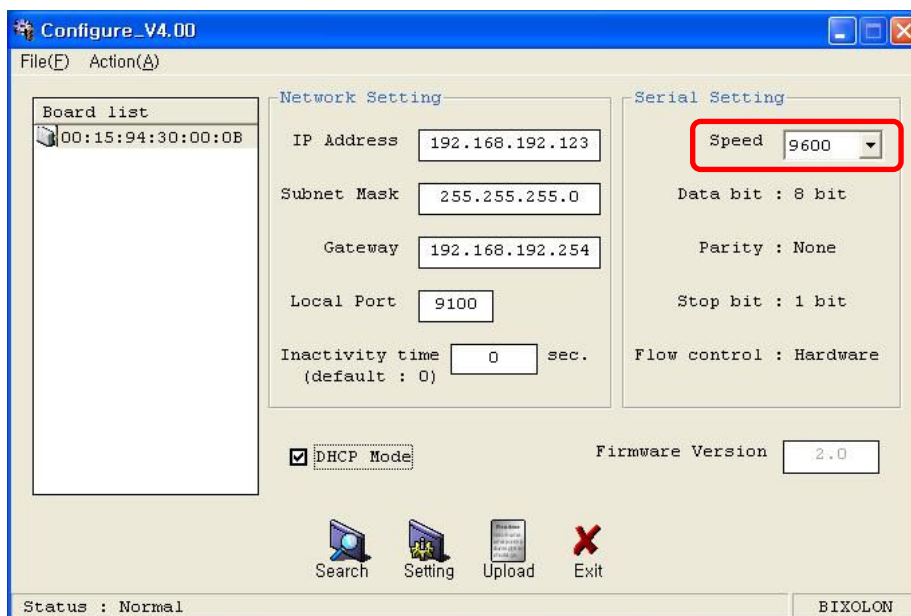
4) Select MAC Address in **Board list** and check at **DHCP Mode**.



[Note]

- If many MAC addresses appear, refer to the MAC address on the label of the interface card.
- Ask the Network administrator IP and its related information.

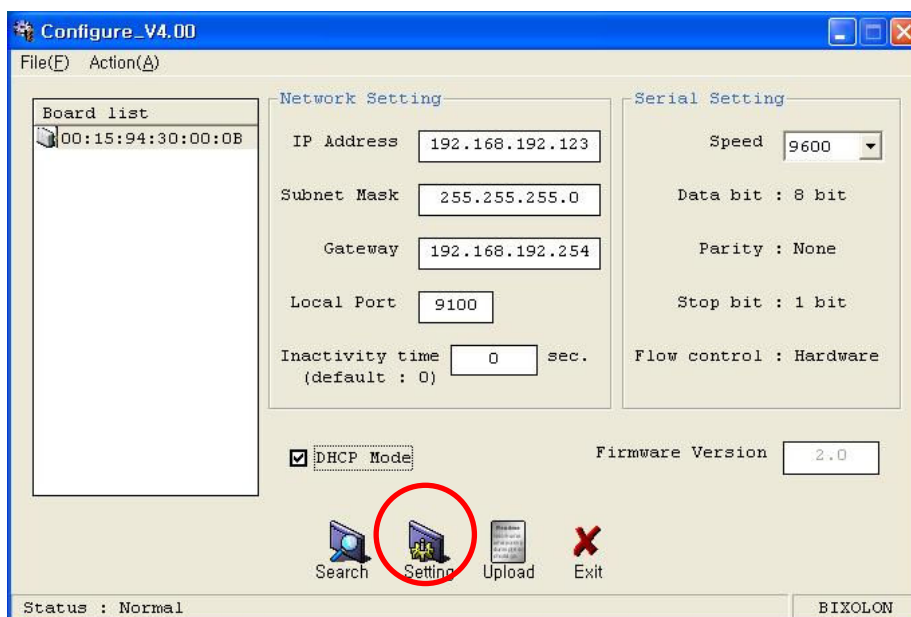
5) Set baud rate at **Serial Setting**.



[Note]

- The baud rate (Speed) should be same as the baud rate of the printer. (Refer to [Appendix 1])
- Highest baud rate (Speed) can be used.

6) When setting finishes, click **Setting**.

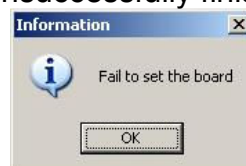


[Note]

Successfully finished set up



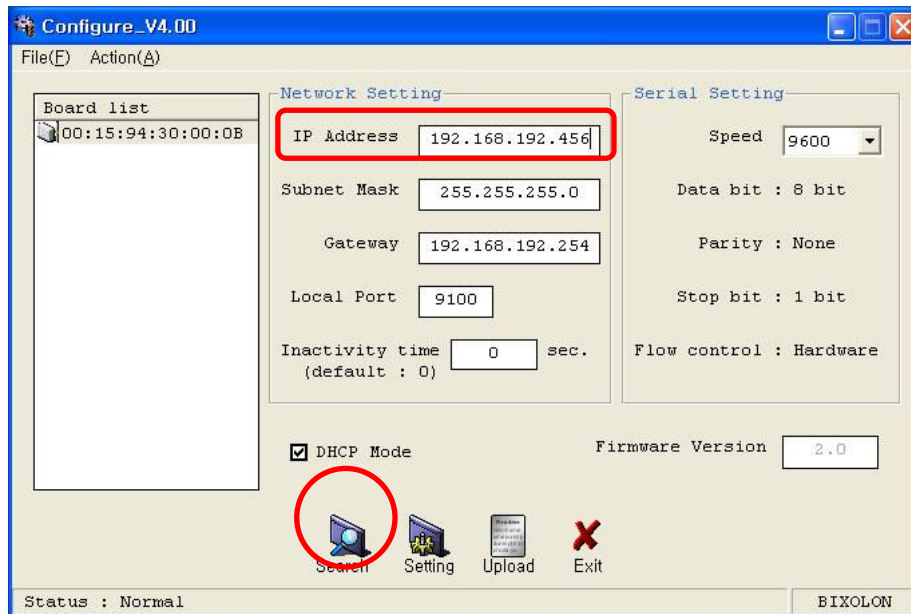
Unsuccessfully finished set up



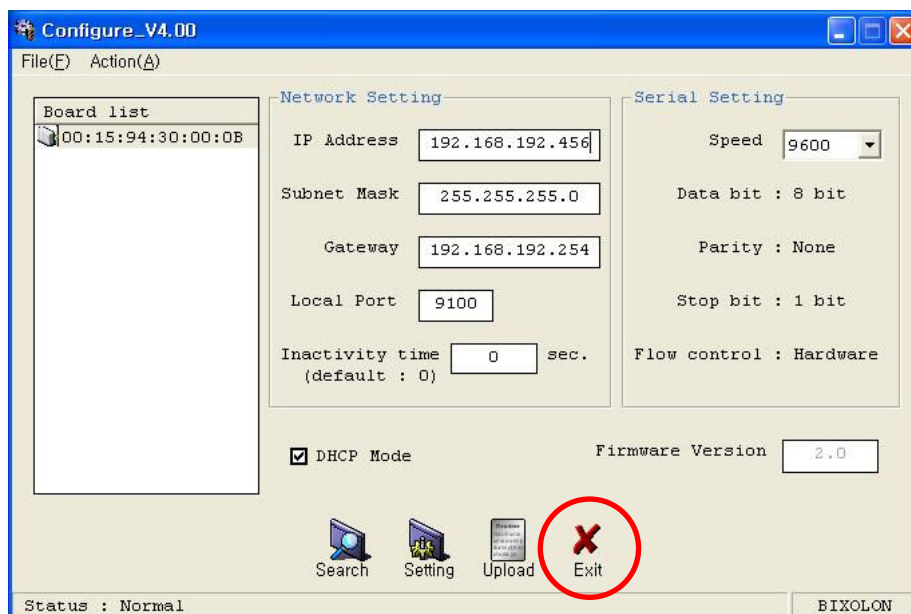
- When setting doesn't finish correctly, try again.

7) Wait approximately 10 or more seconds until the printer receives IP from the server.

8) Click **Search** to check given IP.



9) If the given IP is OK, click **Exit**.



6-2. Web Server

1) Check at **DHCP mode** and click **Apply**.

The screenshot shows a web-based configuration interface titled "Configuration". It contains a table of settings for a device. The "DHCP mode" checkbox is checked and highlighted with a red rectangle. Below it, the "Apply" button is also highlighted with a red rectangle. The settings are as follows:

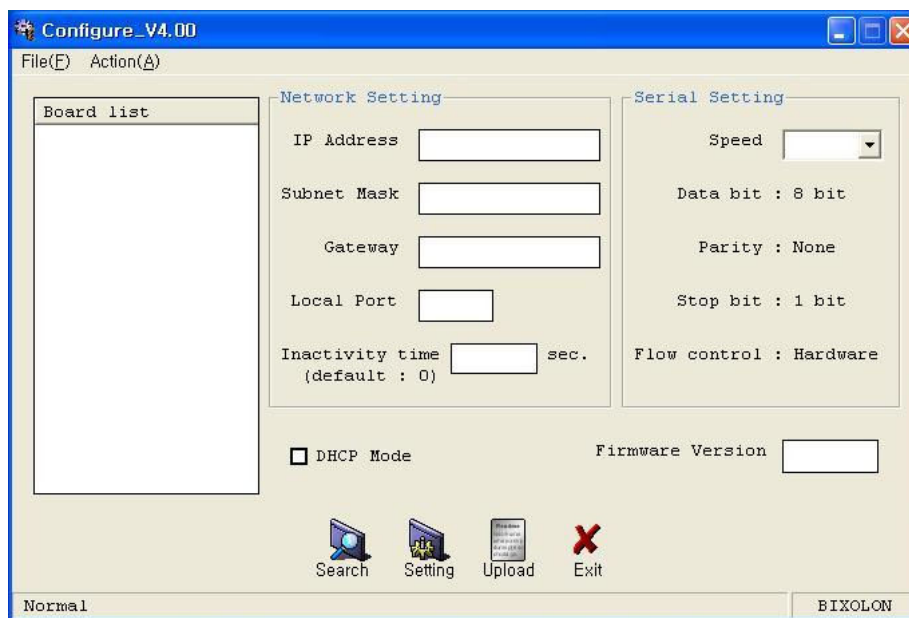
Configuration	
F/W ver.	2.0
MAC	00:15:94:10:00:04
Source IP	192.168.100.134
Subnet Mask	255.255.255.0
Gateway IP	192.168.100.254
Local Port	6000
Inactivity Time	0
Serial speed	57600
DHCP mode	<input checked="" type="checkbox"/>
Firmware update	

2) Push the Function Key on the interface 10 or more seconds from finishing set up.
Enter given IP address at address of Internet Explorer to enter web server.

7. Firmware update

7-1. Configuration Tool

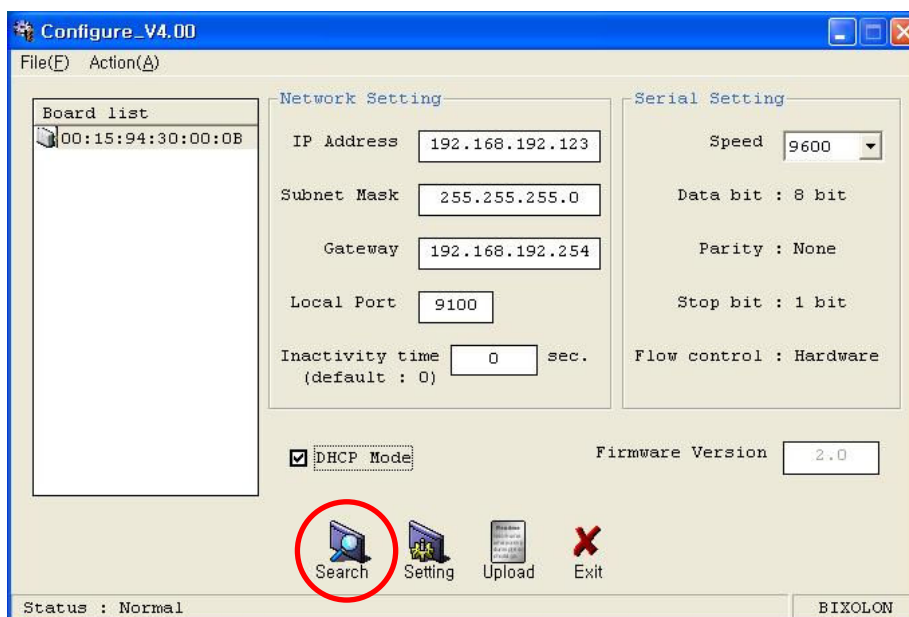
- 1) Turn on the printer
- 2) Execute **Configure Tool**.

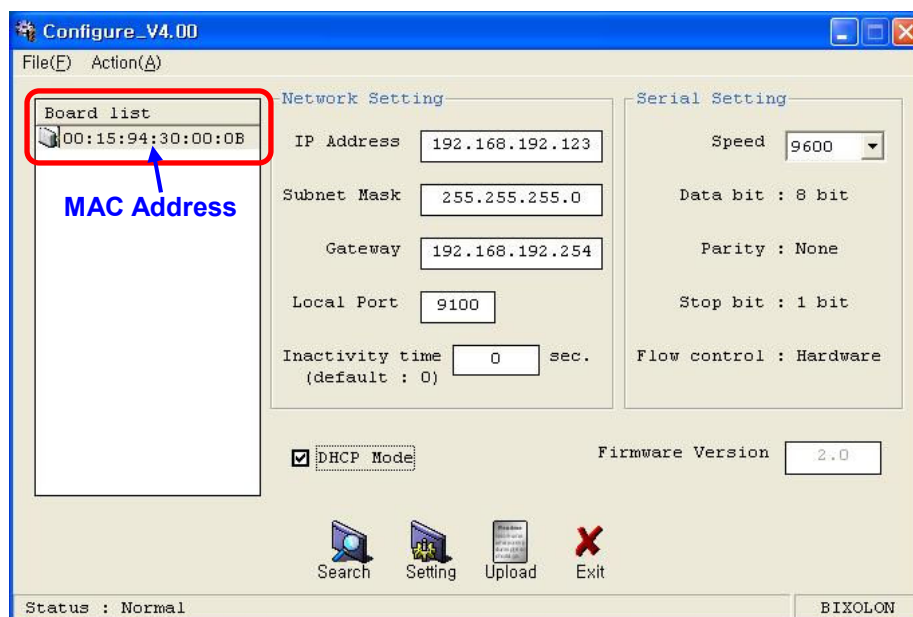


[Note]

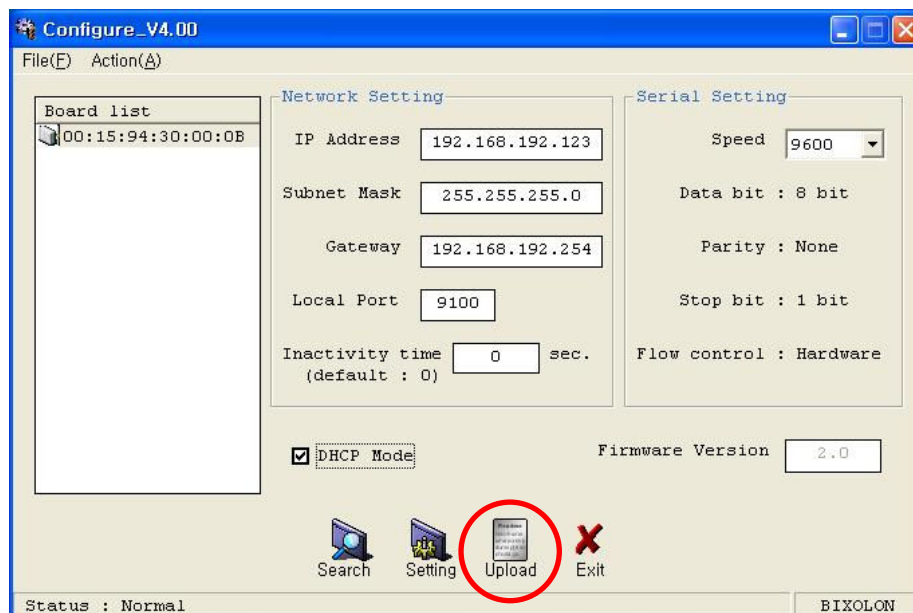
- Use proper Configuration Tool dependent on hardware version

- 3) Click **Search**.



4) Select MAC Address in **Board**.**[Note]**

- If many MAC addresses appear, refer to the MAC address on the label of the interface card.

5) Click **Upload** and select file to download.

[Note]

- Check the extension of the file, which should be “bin”.

Successfully finished F/W update



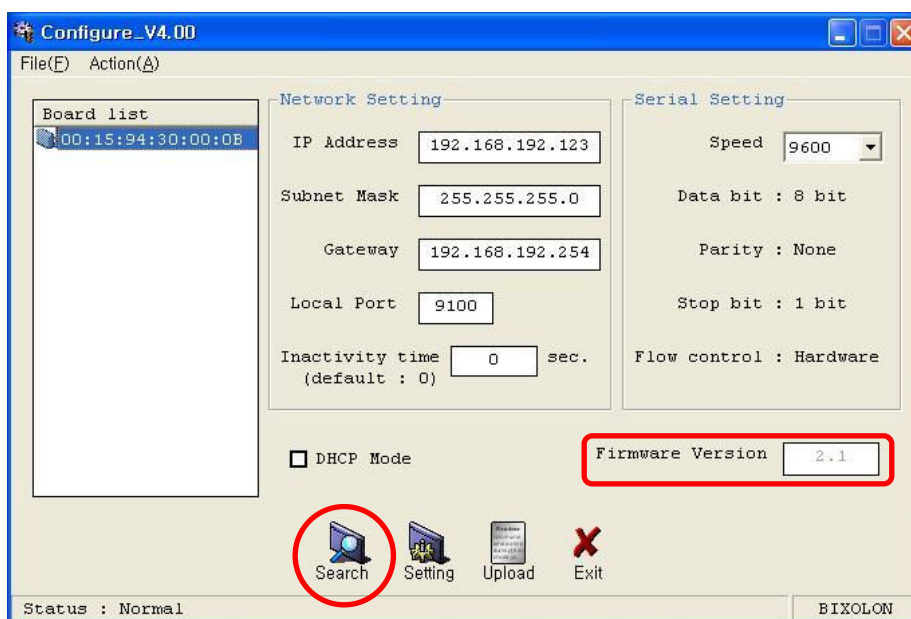
Unsuccessfully finished F/W update



- Printer and available firmware

Printer	Firmware
SRP-770, SRP-770II, SLP-T400	ethernetserial_v5.0
Except SRP-770, SRP-770II	ethernetserial_v2.0

- When firmware update finishes, click Search to check if Firmware is updated successfully.

**[Note]**

Don't turn off the printer while the firmware is updated. It causes fatal harm to interface card

7-2. Web Server

1) Click **Firmware update**.

Configuration

F/W ver. 2.0

MAC 00:15:94:30:00:0B

Source IP 192.168.192.123

Subnet Mask 255.255.255.0

Gateway IP 192.168.192.254

Local Port 9100

Inactivity Time 0

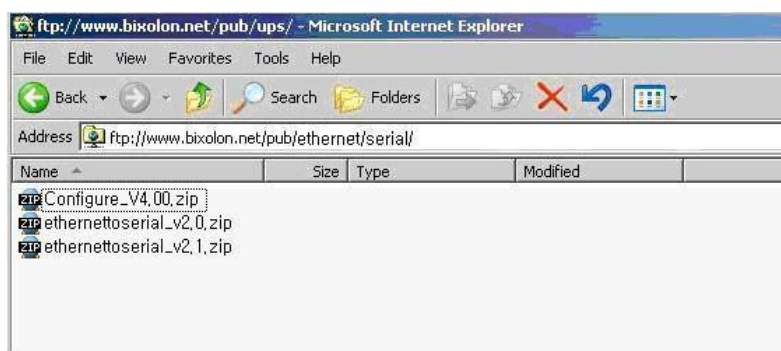
Serial speed 9600

DHCP mode ☐

Apply

[Firmware update](#)

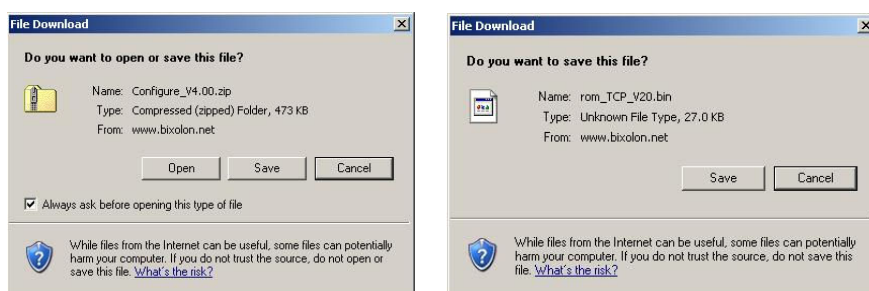
2) Internet Explorer is executed and it moves to download site automatically.



[Note] Printer and available firmware

Printer	Firmware
SRP-770, SRP-770II, SLP-T400	ethernetserial_v5.0
Except SRP-770, SRP-770II	ethernetserial_v2.0

3) Download **Configure_Vx.xx.zip** file and ***.bin** file.



[Note]

You can download it by double-clicking icons or copy and paste.

4) Unzip **Configure_Vx.xx.zip** and execute **Configure_Vx.xx.exe** at **Configure_Vx.xx** folder.

COMDLG32.OCX	ActiveX Control	61 KB	No	138 KB	56%	5/22/2000 12:00 AM
Configure_setup.bat	MS-DOS Batc...	1 KB	No	1 KB	60%	6/15/2006 2:07 PM
Configure_V4.00.exe	Application	25 KB	No	80 KB	70%	6/16/2006 9:33 AM
MSCOMCT2.OCX	ActiveX Control	332 KB	No	633 KB	48%	5/17/2004 6:19 PM
MSWIN5CK.OCX	ActiveX Control	54 KB	No	107 KB	50%	12/6/2000 12:00 AM
progress.avi	Video Clip	3 KB	No	135 KB	99%	1/27/2002 5:34 AM

[Note]

- In case **Configure_Vx.xx.exe** can't be executed, run **configure_setup.bat** first and retry it.

5) Click **Upload** at Configuration Tool and ***.bin** to update Ethernet firmware.

8. Ethernet test by using Windows test page

If you don't have any test program to check printer's performance, you can use Windows driver. It is available for Windows 2000, XP and 2003 server.

- 1) Install Windows driver of the printer. When the driver installation finishes, reboot the computer.

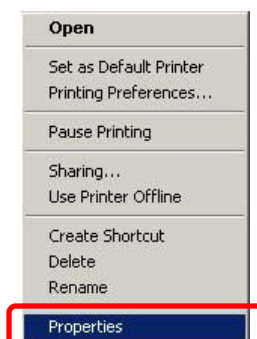
[Note]

- You can find drivers at <http://www.samsungminiprinters.com>

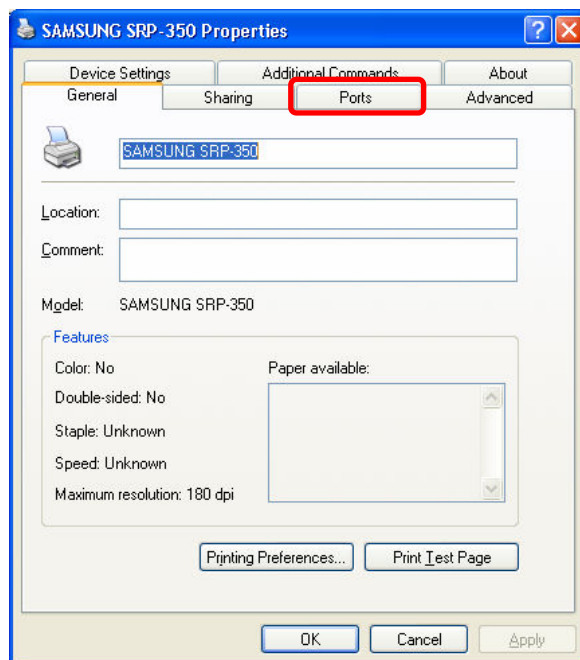
- 2) Start > Control panel > Printers and Faxes



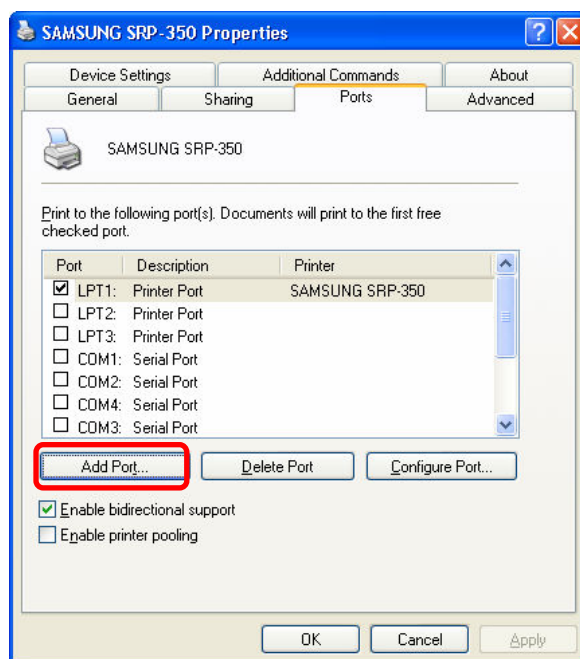
- 3) Select the printer icon and click it with the right button to select **properties**.



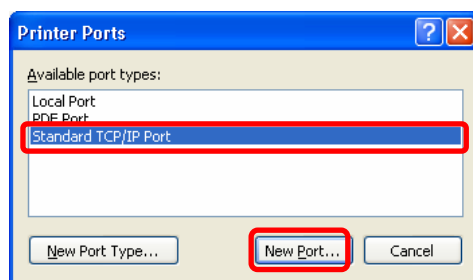
4) Select **Ports** tab.



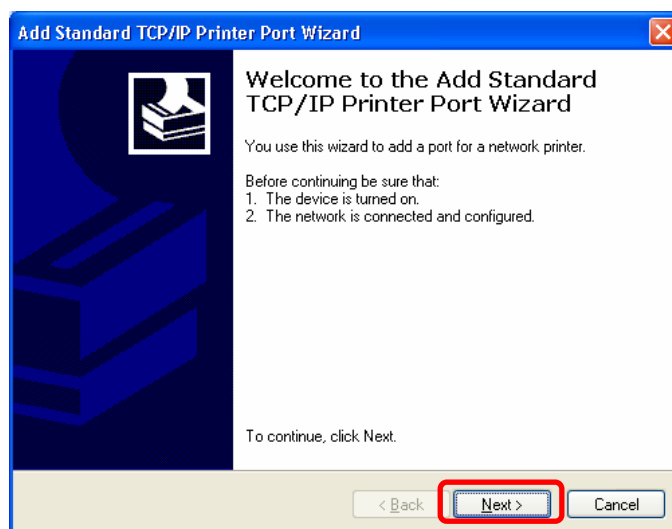
5) Click **Add Port**.



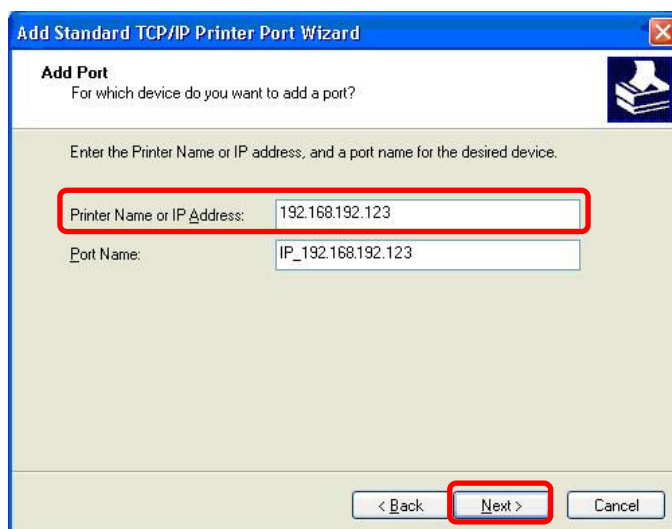
6) Select **Standard TCP/IP Port** and click **New port**.



7) When standard TCP/IP printer add wizard window pops up, click **Next**.



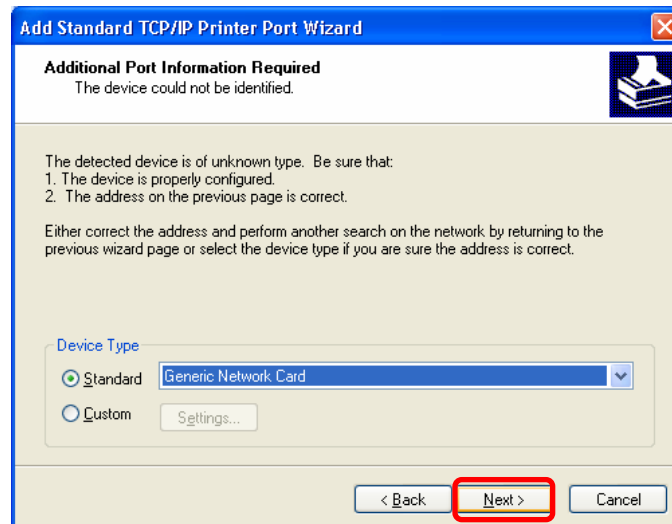
8) Enter printer IP at **Printer Name or IP Address** and click **Next**.



[Note]

Enter same IP address as the Ethernet interface card. Enter only at **Printer Name or IP Address**.

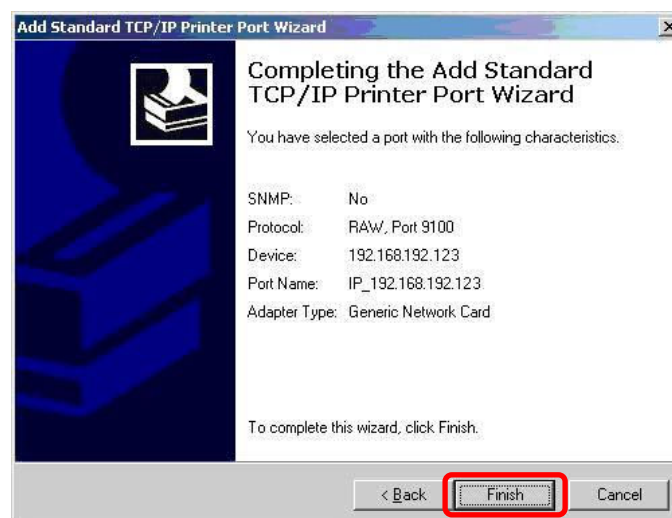
9) Click **Next**.



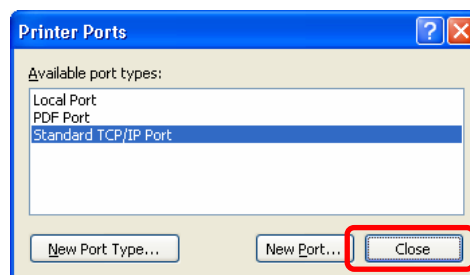
[Note]

Click **Next** without any selection nor change.

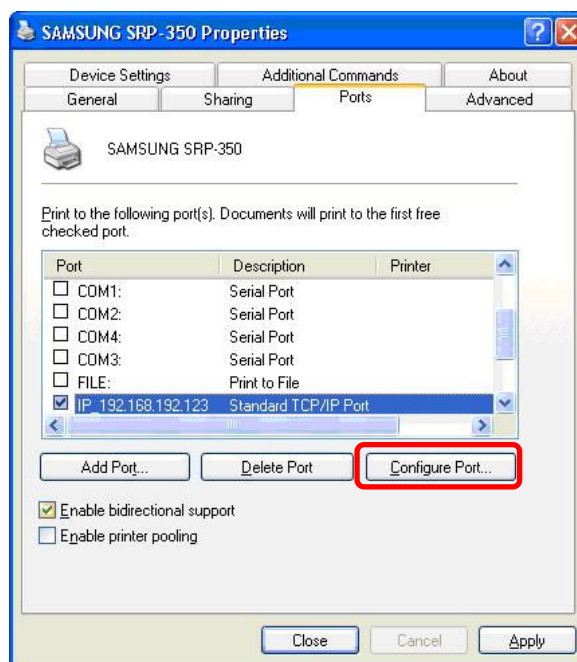
10) Click **Finish**.



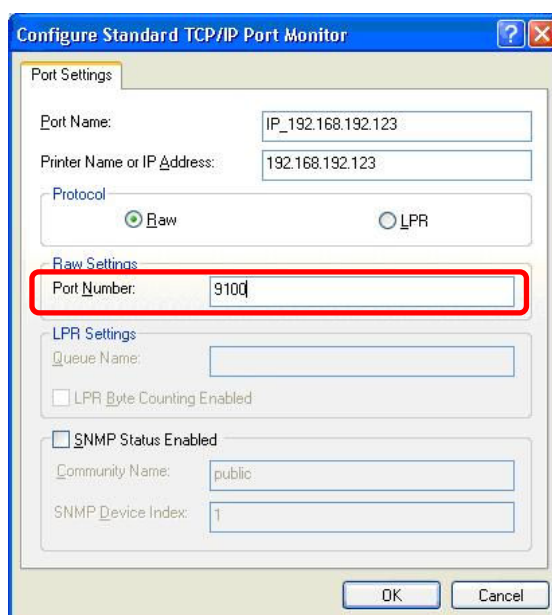
11) Click **Close** to close Printer port window



12) Click **Configure Port**.



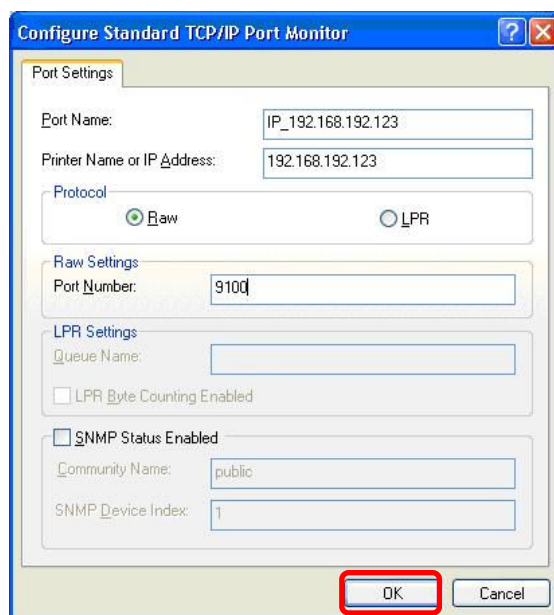
13) Enter same port number as the value of Local Port of the Ethernet interface at **Raw Setting**.



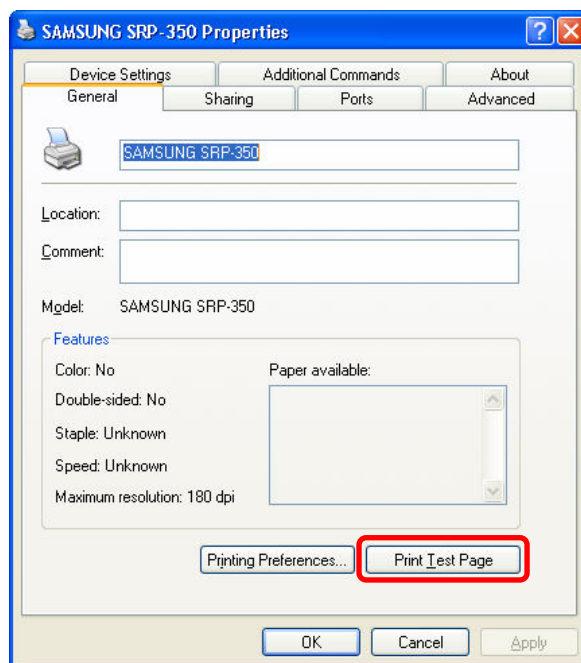
[Note]

There is no change except **Raw Setting**.

14) Click **OK**.



15) Select General tab and click **Print Test Page** to check if the printer works properly.



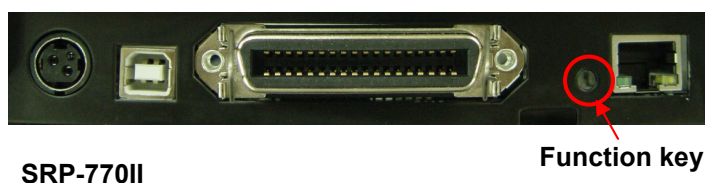
[Appendix 1] Printer DIP switch set up

Printer	Baud rate & DSW set up				Handshaking & Parity
SRP-350	Baud rate	DSW 1-7	DSW 1-8		DTR/DSR : SW 1-3 OFF 8 data bit : SW 1-4 OFF None parity : SW 1-5 OFF
	57600bps	OFF	ON		
	38400bps	ON	ON		
	19200bps	OFF	OFF		
	9600bps	ON	OFF		
SRP-350plus	Baud rate	DSW 1-6	DSW 1-7	DSW1-8	DTR/DSR: SW1-2 off 8 data bit: SW1-3 off none parity: SW1-4 off
	115200bps	ON	ON	ON	
	57600bps	OFF	OFF	ON	
	38400bps	OFF	ON	ON	
	19200bps	OFF	OFF	OFF	
	9600bps	OFF	ON	OFF	
	4800bps	ON	OFF	ON	
	2400bps	ON	OFF	OFF	
SRP-270	Baud rate	DSW 2-7	DSW 2-8		DTR/DSR : SW 2-3 OFF 8 data bit : SW 1-4 OFF None parity : SW 1-5 OFF
	19200bps	ON	ON		
	9600bps	OFF	OFF		
	4800bps	ON	OFF		
	2400bps	OFF	ON		
SRP-370 SRP-372	Baud rate	DSW 1-1	DSW 1-2		DTR/DSR : SW 1-3 OFF 8 data bit : MSW 9 None parity : MSW 9 [Note] Use Memory SW to change
	115200bps	ON	ON		
	38400bps	OFF	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
SRP-275	Baud rate	DSW 2-7	DSW 2-8		DTR/DSR : SW 2-3 OFF 8 data bit : SW 2-4 OFF None parity : SW 2-5 OFF
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
	4800bps	OFF	ON		
	2400bps	ON	ON		
SRP-770	Baud rate	DSW 2-1	DSW 2-2		RTS/CTS: SW2-3 ON 8 data bit none parity
	115200bps	ON	ON		
	57600bps	OFF	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
SRP-770 II	Baud rate	DSW 2-1	DSW 2-2		DTR/DSR 8 data bit None parity Fixed
	230400bps	OFF	ON		
	115200bps	ON	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		
I SLP-T400	Baud rate	DSW 2-1	DSW 2-2		DTR/DSR 8 data bit None parity Fixed
	230400bps	OFF	ON		
	115200bps	ON	ON		
	19200bps	ON	OFF		
	9600bps	OFF	OFF		

[Appendix 2] Function Key set up

1. How to use

- (1) Turn on the printer
- (2) Wait 10 or more seconds until the Ethernet interface boots up
- (3) Push the Function key



- (4) The settings will be printed only one time since the printer is turned on.
- (5) Turn off and on the printer to print them again.

2. Printed settings

- MAC address
- IP address
- Subnet Mask
- Gateway
- Port
- Inactivity time
- Serial speed
- Firmware Version

[Appendix 3] Factory Reset

1. Default setting after factory reset

- Activate DHCP mode
- Local Port: 9100
- Inactivity Time: 0
- Speed
 - SRP-770II, SLP-T400: 230400 bps
 - SRP-270, SRP-275, SRP-350, SRP-350plus, SRP-370, SRP-372: 9600 bps

2. How to reset

- 1) Turn off the printer
- 2) Turn on the printer while pressing Function Key

[Note]

Press Function key 3 more seconds after turning on the printer.

- 3) Wait 10 seconds until new IP address is allocated to the printer.
 - The IP address will be allocated automatically under DHCP mode.

[Note]

- DHCP Network environment
 - Connect to web-server with newly allocated IP address.
 - Check new IP address by pressing Function key
- Static IP Network environment
 - The IP address will not be allocated automatically.
 - Set up Static IP with Configurator utility.

- 4) Print Network setting information by pressing Function key
 - Connect web-server to change any network setting

[Note]

Check if the baud rate of the printer is set same as below.

- SRP-770II, SLP-T400: 230400 bps
- SRP-270, SRP-275, SRP-350, SRP-350plus, SRP-370, SRP-372: 9600bps